



1

SEQUENCE LISTING

<110> Steward, Lance E.
Aoki, K. Roger
Sachs, George

<120> Methods and Compositions for the
Treatment of Pancreatitis

<130> 17282

<140> 09/288,326

<141> 1999-04-08

<160> 15

<170> FastSEQ for windows Version 4.0

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<212> PRT

<213> Homo Sapiens

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35 40 45
Arg Ala Glu Glu Ala Pro Arg Arg Gln Leu Arg Val Ser Gln Arg Thr
50 55 60
Asp Gly Glu Ser Arg Ala His Leu Gly Ala Leu Ala Arg Tyr Ile
65 70 75 80
Gln Gln Ala Arg Lys Ala Pro Ser Gly Arg Met Ser Ile Val Lys Asn
85 90 95
Leu Gln Asn Leu Asp Pro Ser His Arg Ile Ser Asp Arg Asp Tyr Met
100 105 110
Gly Trp Met Asp Phe Gly Arg Arg Ser Ala Glu Glu Tyr Glu Tyr Pro
115 120 125
Ser

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<211> 58

<212> PRT

<213> Homo Sapiens

<400> 2

Val Ser Gln Arg Thr Asp Gly Glu Ser Arg Ala His Leu Gly Ala Leu
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Leu Ala Arg Tyr Ile Gln Gln Ala Arg Lys Ala Pro Ser Gly Arg Met
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Ser Ile Val Lys Asn Leu Gln Asn Leu Asp Pro Ser His Arg Ile Ser
35 40 45
Asp Arg Asp Tyr Met Gly Trp Met Asp Phe
50 55

<210> 3

<211> 39

<212> PRT

<213> Homo Sapiens

<400> 3

Tyr Ile Gln Gln Ala Arg Lys Ala Pro Ser Gly Arg Met Ser Ile Val
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 Lys Asn Leu Gln Asn Leu Asp Pro Ser His Arg Ile Ser Asp Arg Asp
 20 25 30
 Tyr Met Gly Trp Met Asp Phe
 35

<210> 4

<211> 33

<212> PRT

<213> Homo Sapiens

<400> 4

Lys Ala Pro Ser Gly Arg Met Ser Ile Val Lys Asn Leu Gln Asn Leu
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 Asp Pro Ser His Arg Ile Ser Asp Arg Asp Tyr Met Gly Trp Met Asp
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 Phe

<210> 5

<211> 12

<212> PRT

<213> Homo Sapiens

<400> 5

Ile Ser Asp Arg Asp Tyr Met Gly Trp Met Asp Phe
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<210> 6

<211> 9

<212> PRT

<213> Homo Sapiens

<400> 6

Arg Asp Tyr Met Gly Trp Met Asp Phe
 1 5

<210> 7

<211> 448

<212> PRT

<213> Clostridium botulinum

<400> 7

Met Pro Phe Val Asn Lys Gln Phe Asn Tyr Lys Asp Pro Val Asn Gly
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 Val Asp Ile Ala Tyr Ile Lys Ile Pro Asn Ala Gly Gln Met Gln Pro
 20 25 30
 Val Lys Ala Phe Lys Ile His Asn Lys Ile Trp Val Ile Pro Glu Arg
 35 40 45
 Asp Thr Phe Thr Asn Pro Glu Gly Asp Leu Asn Pro Pro Pro Glu
 50 55 60
 Ala Lys Gln Val Pro Val Ser Tyr Tyr Asp Ser Thr Tyr Leu Ser Thr
 65 70 75 80
 Asp Asn Glu Lys Asp Asn Tyr Leu Lys Gly Val Thr Lys Leu Phe Glu
 85 90 95
 Arg Ile Tyr Ser Thr Asp Leu Gly Arg Met Leu Leu Thr Ser Ile Val

Arg	Gly	Ile	Pro	Phe	Trp	Gly	Gly	Ser	Thr	Ile	Asp	Thr	Glu	Leu	Lys
Val	Ile	Asp	Thr	Asn	Cys	Ile	Asn	Val	Ile	Gln	Pro	Asp	Gly	Ser	Tyr
Arg	Ser	Glu	Glu	Leu	Asn	Leu	Val	Ile	Ile	Gly	Pro	Ser	Ala	Asp	Ile
Ile	Gln	Phe	Glu	Cys	Lys	Ser	Phe	Gly	His	Glu	Val	Leu	Asn	Leu	Thr
Arg	Asn	Gly	Tyr	Gly	Ser	Thr	Gln	Tyr	Ile	Arg	Phe	Ser	Pro	Asp	Phe
Thr	Phe	Gly	Phe	Glu	Glu	Ser	Leu	Glu	Val	Asp	Thr	Asn	Pro	Leu	Leu
Gly	Ala	Gly	Lys	Phe	Ala	Thr	Asp	Pro	Ala	Val	Thr	Leu	Ala	His	Glu
Leu	Ile	His	Ala	Gly	His	Arg	Leu	Tyr	Gly	Ile	Ala	Ile	Asn	Pro	Asn
Arg	Val	Phe	Lys	Val	Asn	Thr	Asn	Ala	Tyr	Tyr	Glu	Met	Ser	Gly	Leu
Glu	Val	Ser	Phe	Glu	Glu	Leu	Arg	Thr	Phe	Gly	Gly	His	Asp	Ala	Lys
Phe	Ile	Asp	Ser	Leu	Gln	Glu	Asn	Glu	Phe	Arg	Leu	Tyr	Tyr	Tyr	Asn
Lys	Phe	Lys	Asp	Ile	Ala	Ser	Thr	Leu	Asn	Lys	Ala	Lys	Ser	Ile	Val
Gly	Thr	Thr	Ala	Ser	Leu	Gln	Tyr	Met	Lys	Asn	Val	Phe	Lys	Glu	Lys
Tyr	Leu	Leu	Ser	Glu	Asp	Thr	Ser	Gly	Lys	Phe	Ser	Val	Asp	Lys	Leu
Lys	Phe	Asp	Lys	Leu	Tyr	Lys	Met	Leu	Thr	Glu	Ile	Tyr	Thr	Glu	Asp
Asn	Phe	Val	Lys	Phe	Phe	Lys	Val	Leu	Asn	Arg	Lys	Thr	Tyr	Leu	Asn
Phe	Asp	Lys	Ala	Val	Phe	Lys	Ile	Asn	Ile	Val	Pro	Lys	Val	Asn	Tyr
Thr	Ile	Tyr	Asp	Gly	Phe	Asn	Leu	Arg	Asn	Thr	Asn	Leu	Ala	Ala	Asn
Phe	Asn	Gly	Gln	Asn	Thr	Glu	Ile	Asn	Asn	Met	Asn	Phe	Thr	Lys	Leu
Lys	Asn	Phe	Thr	Gly	Leu	Phe	Glu	Phe	Tyr	Lys	Leu	Leu	Cys	Val	Arg
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<210> 8

<211> 423

<212> PRT

<213> Clostridium botulinum

<400> 8

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Ile	Thr	Ser	Asp	Thr	Asn	Ile	Glu	Ala	Ala	Glu	Glu	Asn	Ile	Ser	Leu
Asp	Leu	Ile	Gln	Gln	Tyr	Tyr	Leu	Thr	Phe	Asn	Phe	Asp	Asn	Glu	Pro
Glu	Asn	Ile	Ser	Ile	Glu	Asn	Leu	Ser	Ser	Asp	Ile	Ile	Gly	Gln	Leu
Glu	Leu	Met	Pro	Asn	Ile	Glu	Arg	Phe	Pro	Asn	Gly	Lys	Lys	Tyr	Glu
Leu	Asp	Lys	Tyr	Thr	Met	Phe	His	Tyr	Leu	Arg	Ala	Gln	Glu	Phe	Glu

His Gly Lys 100 Ser Arg Ile Ala Leu Thr Asn Ser Val Asn 110 Glu Ala Leu
 Leu Asn 115 Ser Arg Val Tyr Thr Phe Phe Ser Ser 125 Asp Tyr Val Lys
 Lys 130 Val Asn Lys Ala Thr 135 Glu Ala Ala Met Phe 140 Leu Gly Trp Val Glu
 145 Gln Leu Val Tyr Asp Phe Thr Asp Glu Thr Ser Glu Val Ser Thr Thr
 Asp Lys Ile Ala Asp Ile Thr Ile Ile Ile Pro Tyr Ile Gly Pro Ala
 Leu Asn Ile 180 Gly Asn Met Leu Tyr 185 Lys Asp Asp Phe Val 190 Gly Ala Leu
 Ile Phe Ser Gly Ala Val Ile Leu Leu Glu Phe Ile Pro Glu Ile Ala
 210 Ile Pro Val Leu Gly Thr Phe Ala Leu Val Ser Tyr Ile Ala Asn Lys
 225 Val Leu Thr Val Gln Thr Ile Asp Asn Ala 235 Leu Ser Lys Arg Asn Glu
 Lys Trp Asp Glu Val Tyr Lys Tyr Ile Val Thr Asn Trp Leu Ala Lys
 Val Asn Thr Gln Ile Asp Leu Ile Arg Lys Lys Met Lys Glu Ala Leu
 Glu Asn 275 Ala Glu Ala Thr 280 Lys Ala Ile Ile Asn Tyr Gln Tyr Asn
 290 Gln Tyr Thr Glu Glu Glu Lys Asn Asn Ile Asn Phe Asn Ile Asp Asp
 305 Leu Ser Ser Lys Leu Asn Glu Ser Ile Asn Lys Ala Met Ile Asn Ile
 Asn Lys Phe Leu 325 Asn Gln Cys Ser Val 330 Ser Tyr Leu Met Asn Ser Met
 Ile Pro Tyr Gly Val Lys Arg Leu Glu Asp Phe Asp Ala Ser Leu Lys
 Asp Ala Leu Leu Lys Tyr Ile Tyr Asp Asn Arg Gly Thr Leu Ile Gly
 370 Gln Val Asp Arg Leu Lys Asp Lys Val Asn Asn Thr Leu Ser Thr Asp
 385 Ile Pro Phe Gln Leu Ser Lys Tyr Val Asp Asn Gln Arg Leu Leu Ser
 Thr Phe Thr Glu Tyr Ile Lys 405 Thr Phe Thr Glu Tyr Ile Lys 415
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<210> 9

<211> 382

<212> PRT

<213> Clostridium Botulinum

<400> 9

Gln Leu Phe Asn Leu Glu Ser Ser Lys Ile Glu Val Ile Leu Lys Asn
 1 Ala Ile Val Tyr 5 Asn Ser Met Tyr Glu 10 Asn Phe Ser Thr Ser Phe Trp
 Ile Arg Ile Pro Lys Tyr Phe Asn Ser Ile Ser Leu Asn Asn Glu Tyr
 Thr Ile Ile Asn Cys Met Glu Asn Asn Ser Gly Trp Lys Val Ser Leu
 50 Asn Tyr Gly Glu Ile Ile Trp Thr Leu Gln Asp Thr Gln Glu Ile Lys
 65 Gln Arg Val Val Phe Lys Tyr Ser Gln Met Ile Asn Ile Ser Asp Tyr
 Ile Asn Arg Trp 85 Ile Phe Val Thr Ile Thr Asn Asn Arg Leu Asn Asn
 ser Lys Ile Tyr 100 Ile Asn Gly Arg Leu Ile Asp Gln Lys Pro Ile Ser

115 120 125
 Asn Leu Gly Asn Ile His Ala Ser Asn Asn Ile Met Phe Lys Leu Asp
 130 135 140
 Gly Cys Arg Asp Thr His Arg Tyr Ile Trp Ile Lys Tyr Phe Asn Leu
 145 150 155 160
 Phe Asp Lys Glu Leu Asn Glu Lys Glu Ile Lys Asp Leu Tyr Asp Asn
 165 170 175
 Gln Ser Asn Ser Gly Ile Leu Lys Asp Phe Trp Gly Asp Tyr Leu Gln
 180 185 190
 Tyr Asp Lys Pro Tyr Tyr Met Leu Asn Leu Tyr Asp Pro Asn Lys Tyr
 195 200 205
 Val Asp Val Asn Asn Val Gly Ile Arg Gly Tyr Met Tyr Leu Lys Gly
 210 215 220
 Pro Arg Gly Ser Val Met Thr Thr Asn Ile Tyr Leu Asn Ser Ser Leu
 225 230 235 240
 Tyr Arg Gly Thr Lys Phe Ile Ile Lys Lys Tyr Ala Ser Gly Asn Lys
 245 250 255
 Asp Asn Ile Val Arg Asn Asn Asp Arg Val Tyr Ile Asn Val Val Val
 260 265 270
 Lys Asn Lys Glu Tyr Arg Leu Ala Thr Asn Ala Ser Gln Ala Gly Val
 275 280 285
 Glu Lys Ile Leu Ser Ala Leu Glu Ile Pro Asp Val Gly Asn Leu Ser
 290 295 300
 Gln Val Val Val Met Lys Ser Lys Asn Asp Gln Ile Thr Asn Lys
 305 310 315 320
 Cys Lys Met Asn Leu Gln Asp Asn Asn Gly Asn Asp Ile Gly Phe Ile
 325 330 335
 Gly Phe His Gln Phe Asn Asn Ile Ala Lys Leu Val Ala Ser Asn Trp
 340 345 350
 Tyr Asn Arg Gln Ile Glu Arg Ser Ser Arg Thr Leu Gly Cys Ser Trp
 355 360 365
 Glu Phe Ile Pro Val Asp Asp Gly Trp Gly Glu Arg Pro Leu
 370 375 380

<210> 10

<211> 4835

<212> DNA

<213> Clostridium botulinum

<400> 10

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 ggtcatttaa ataattaata atttaattaa ttttaaatat tataagaggt gttaaatatg 360
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<211> 15

<212> PRT

<213> Homo sapiens

<400> 11
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 1 5 10 15

<210> 12
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 <213> Generic Zinc Binding Domain

<220>
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 1 5

<210> 13
 <211> 5
 <212> PRT
 <213> Clostridium species

<400> 13
 His Glu Leu Ile His
 1 5

<210> 14
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 <212> PRT
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<400> 14
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 1 5

<210> 15
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 <213> Clostridium species

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